IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-2. **(Cancelled)**

3. **(Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim ~~1~~ 72, wherein the left and right swing arms are made of steel.

4. **(Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim ~~1~~ 72, wherein the left and right swing arms are made of aluminum.

5. **(Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim ~~1~~ 72, wherein each swing arm is capable of pivotal movement about the ~~rotation~~ axis relative to the other swing arm.

6. **(Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 5, wherein a maximum angle of relative ~~rotational~~ pivotal displacement of the left swing arm with respect to the right swing arm is about 5°-25°.

7. **(Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 6, wherein the maximum angle of relative ~~rotational~~ pivotal displacement is about 5°-10°.

8. **(Cancelled)**

9. **(Withdrawn-Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim ~~1~~ 72, wherein the ~~torsion control mechanism~~ suspension system comprises a damping device coupled to each of the left and right swing arms.

10. **(Withdrawn-Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 9, ~~wherein the torsion control mechanism comprises a torsion bar fixedly connected to and extending between each of the left and right swing arms,~~ wherein the torsion bar extends within the damping device.

11. **(Withdrawn-Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 1, wherein the ~~torsion control mechanism~~ suspension system comprises a clutch assembly coupled to each of the left and right swing arms.

12. **(Withdrawn-Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 11, ~~wherein the torsion control mechanism comprises a torsion bar connected to and extending between each of the left and right swing arms~~, wherein the torsion bar extends within the clutch assembly.

13. **(Withdrawn-Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 11, wherein the clutch assembly comprises a pair of clutch members coupled to respective swing arms.

14. **(Withdrawn-Currently Amended)** ~~A suspension system~~ An all-terrain vehicle according to claim 13, wherein each of the clutch members comprises a respective interlocking structure cooperable with the interlocking structure of the other clutch member, at least one of the pair of clutch members being movable relative to the other clutch member such that the interlocking structures are movable between an interlocked, non-rotating relation and a spaced relation.

15. (**Currently Amended**) ~~A suspension system~~ An all-terrain vehicle according to claim ~~1~~ 72, wherein the left swing arm and the right swing arm are generally transverse to the ~~torsion control mechanism~~ torsion bar.

16-22. (**Cancelled**)

23. (**Currently Amended**) ~~A suspension system~~ An all-terrain vehicle according to claim ~~22~~ 72, further comprising a flange cover coupled to an outer side of each housing, each flange cover being connected to an end of the torsion bar.

24. (**Currently Amended**) ~~A suspension system~~ An all-terrain vehicle according to claim ~~20~~ 72, wherein each of the left and right swing arms is capable of relative pivotal movement about the ~~rotation~~ axis relative to the other of the swing arms through a range of pivotal movement defined by a torsional deflection limit of the torsion bar.

25. (**Currently Amended**) ~~A suspension system~~ An all-terrain vehicle according to claim 24, wherein the torsional deflection limit of the torsion bar is within an elastic deformation limit of the torsion bar.

26.-28. (**Cancelled**)

29. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim ~~27~~ 6, wherein, if the maximum angle of displacement is reached, movement of one of the left and right ~~wheels~~ swing arms beyond about 5°-25° will cause movement of the other one of the right and left ~~wheels~~ swing arms.

30. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim ~~27~~ 72, further comprising a differential mounted on the frame, the differential being coupled to the left swing arm and the right swing arm using half shafts including one of plunging joints and universal joints.

31. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 30, wherein each of the left and right swing arms comprises a rear housing having an inner side to which a respective one of the left and right half shafts is coupled.

32. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 31, wherein each rear housing comprises an outer side to which a respective one of left and right wheels is coupled.

33.-35. (**Cancelled**)

36. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim ~~34~~ 72, wherein the torsion bar is transverse to the driving direction of the vehicle.

37. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim ~~27~~ 72, further comprising a shock absorber connection member provided on each of the left and right swing arms.

38. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim ~~27~~ 72, wherein the frame comprises:

a first frame member;

a second frame member;

at least a first cross member and a second cross member extending between the first and second frame members to thereby define a closed perimeter with an engine receiving space therein; and

first and second suspension mounting points associated with at least one of the first frame member, the second frame member, the first cross member, and the second cross member,

wherein at least one of the first frame member and the second frame member is positioned substantially along a longitudinal centerline of the frame and extends from the first suspension mounting point to the second suspension mounting point.

39. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, wherein the first member is vertically aligned with the second frame member.

40. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, wherein each of the first and second frame members and the first and second cross members has a uniform cross section throughout a length thereof.

41. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, wherein each of the first and second frame members and the first and second cross members has an identical cross-sectional shape.

42. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, wherein one of said first and second frame members is bent toward the other of the first and second frame members proximate one end thereof to thereby provide one of the first and second cross members.

43. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, further comprising a rear suspension mounting structure rigidly mounted to one of the first and second suspension mounting points.

44. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, wherein each of the first and the second frame members consists essentially of a single beam.

45. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 38, wherein at least one of the first and second frame members consists essentially of a single beam.

46. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle according to claim 45, wherein the single beam comprises a closed tubular structure.

47. (**Currently Amended**) An ~~ATV~~ all-terrain vehicle ~~comprising~~ according to claim 72, further comprising a pair of front wheels mounted on the frame and pair of rear wheels, one of the rear wheels mounted to each of the left and the right swing arms, and a wheelbase defined between the front wheels and the rear wheels, and wherein each swing arm has a length and a ratio of the swing arm length to the wheelbase ~~wherein a length of each swing arm is defined as the distance between the pivot axis of the swing arm and the rotation axis of the respective wheel assembly, wherein a wheel base length of the ATV is defined as the distance between the rotation axes of the forward and rearward pairs of wheel assemblies, and wherein a ratio of the swing arm length to the wheel base length~~ ranges from 0.20 to 0.40.

48. **(Currently Amended)** An ~~ATV~~ all-terrain vehicle according to claim 47, wherein the ratio of the swing arm length to the wheelbase ~~length~~ ranges from 0.27 to 0.32.

49.-50. **(Cancelled)**

51. **(Currently Amended)** An ~~ATV~~ all-terrain vehicle according to claim ~~47~~ 72, wherein the ~~pivot~~ axis of the swing arms is disposed above a lower most portion of the frame.

52.-71. **(Cancelled)**

72. **(New)** An all-terrain vehicle, comprising:
a frame;
a suspension system coupled to the frame, the suspension system including:
a hollow transversal member rigidly mounted to the frame,
a left swing arm and a right swing arm, each swing arm pivotally connected to the transversal member at opposite ends thereof, both swing arms pivoting about an axis defined by the transversal member, and
a torsion bar disposed inside the transversal member and connected to each swing arm at opposite ends of the torsion bar,
each of the left and right swing arms comprising a housing through which the torsion bar extends.

73. **(New)** An all-terrain vehicle according to claim 72, wherein the suspension system further comprises a bearing between the front housing and the transversal member.

74. **(New)** An all-terrain vehicle according to claim 72, wherein the suspension system further comprises a bushing between the front housing and the transversal member.

75. **(New)** An all-terrain vehicle according to claim 72, wherein the torsion bar has a polygonal section.

76. **(New)** An all-terrain vehicle according to claim 72, wherein the torsion bar is subjected only to pivotal forces from the swing arms.

77. **(New)** An all-terrain vehicle according to claim 75, further comprising a retaining member having an opening, the torsion bar be inserted in the retaining member opening, whereby the polygonal shape of the torsion bar prevents relative rotation between the torsion bar and the retaining member.

78. **(New)** An all-terrain vehicle according to claim 76, wherein the front housing further comprises a notch in an edge, and the retaining member further comprises a key structure engaging the notch.